

09/521, 545

(FILE 'HOME' ENTERED AT 07:32:16 ON 08 JAN 2002)

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 07:32:51 ON 08 JAN 2002

L1 523 S (SWAN, D? OR SWAN D?)/AU, IN
L2 1708 S (SWANSON, M? OR SWANSON M?)/AU, IN
L3 2 S SURMODICS
L4 9 S L1 AND L2
L5 6 DUP REM L4 (3 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 07:38:49 ON 08 JAN 2002

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 07:41:21 ON 08 JAN 2002

L6 15077 S (GLASS) (5A) (SILAN? OR SLIDE?)
L7 145113 S (EPOXID? OR OXIRAN?)
L8 2222 S L1 OR L2
L9 3 S L7 AND L8
L10 3 DUP REM L9 (0 DUPLICATES REMOVED)
L11 140 S L6 AND L7
L12 19 S L11 AND (ACRYLAM? OR METHACRYL?)
L13 18 S L12 NOT L9
L14 18 DUP REM L13 (0 DUPLICATES REMOVED)
L15 18 S L13 AND L7
L16 140 S L6 AND L7
L17 1 S L16 AND (ARYL) (3A) (KETONE?)
L18 1 S BBA-APMA
L19 7813 S (PHOTO?) (3A) (POLYEPOX? OR EPOX? OR OXIRAN?)
L20 15077 S L6 AND (GLASS? OR SILICA? OR SILANE? OR SLIDE? OR SUBSTRAT?)
L21 2240 S L19 AND (GLASS? OR SILICA? OR SILANE? OR SLIDE? OR SUBSTRAT?)
L22 23457 S (GLYCID?) (5A) (METHACRYLAT? OR ACRYLAT?)
L23 136 S L21 AND L22
L24 1 S L23 AND (TARGET? OR ENZYME? OR NUCLEIC OR NUCLEOTID? OR PROT

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L15 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2002 ACS
AN 1993:423693 CAPLUS
DN 119:23693
TI Two-step **silanization** of porous **glass** or silica gel carriers for enzyme immobilization
IN Wojcik, Anna; Lobarzewski, Jerzy; Blaszcynska, Teresa
PA Uniwersytet Marii Curie Skłodowskiej, Pol.
SO Pol., 9 pp. Abstracted and indexed from the unexamined application.
CODEN: POXXA7

DT Patent
LA Polish
IC ICM C12N011-08
CC 7-7 (Enzymes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	PL 158398	B1	19920831	PL 1988-273601	19880706

AB Porous **glass** or silica gel carriers are **silanized** for enzyme immobilization by a two-step modification. The 1st step is silanization by a silane contg. a vinyl, acrylic, or **methacrylic** group to graft alkene groups onto the carrier surface. In the 2nd step, functional group-contg. monomers are polymd. on the active alkene centers in the presence of initiators of free-radical polymn. to form linear polymer chains contg. a functional group of the original monomer in every link. In effect, every active center alkene is grafted with enzyme-immobilizing functional groups whose no. equals the d.p. Thus, 5 g of 50 m²/g silica gel with 0.6 cm³/g pore vol. was activated for 4 h in vacuo at 200.degree. and then suspended in 20 mL 10% vinyl(2-methoxy)silane in anhyd. toluene, heated at 80.degree. for 6 h, and filtered in vacuo. The product, contg. 0.4 mmol CH(OH)₂ group/g, was kept for 30 min with 50% glycidyl **methacrylate** and 2% benzoyl peroxide in MeOH. Then the gel was filtered, suspended in octene (sic) with 2 mL glycidyl **methacrylate**, agitated for 3 h at 30.degree., filtered and extd. with toluene. The product, contg. 0.7 mmol **epoxide** group/g, was shaken for 16 h with 7 mg Aspergillus niger glucoamylase/mL, pH 8.0 0.1M phosphate buffer, and then treated with 0.1% NaBH4. The carrier contained 1.7 mg protein/g with a glucoamylase activity of 4.0 U/g. The activity remained const. during 30 days.

ST enzyme immobilization **silanization** **glass** silica gel;
glucoamylase immobilization silanized silica gel

IT Silica gel, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(enzyme immobilization on, two-step silanization process in relation to)

IT Immobilization, biochemical

(of enzymes on **silanized** porous **glass** or silica gel, two-step **silanization** process in relation to)

IT Glass, oxide

RL: TEM (Technical or engineered material use); USES (Uses)
(porous, enzyme immobilization on, two-step silanization process in relation to)

IT 9032-08-0, Glucoamylase

RL: USES (Uses)
(of Aspergillus niger, immobilization on silanized silica gel carrier of, two-step silanization process in relation to)

IT 25067-05-4DP, Poly(glycidyl **methacrylate**), reaction products with vinyl(2-methoxysilane)-modified silica gel carriers

RL: PREP (Preparation)
(prepn. of, for glucoamylase immobilization)

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L5 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS
AN 2001:598434 CAPLUS
DN 135:177719
TI Target molecule attachment to surfaces
IN Chappa, Ralph A.; Hu, Sheau-Ping; Swan, Dale G.; Swanson, Melvin J.; Guire, Patrick E.
PA Surmodics, Inc., USA
SO U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. 5,858,653.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2001014448	A1	20010816	US 1999-227913	19990108
	US 5858653	A	19990112	US 1997-940213	19970930
	WO 2000040593	A2	20000713	WO 2000-US535	20000110
	WO 2000040593	A3	20001228		
	W: AU, CA, JP, MX				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1141385	A2	20011010	EP 2000-903199	20000110
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1997-940213	A2	19970930		
	US 1999-227913	A	19990108		
	WO 2000-US535	W	20000110		
AB	Method and reagent compn. for covalent attachment of target mols., such as nucleic acids, onto the surface of a substrate are described. The reagent compn. includes groups capable of covalently binding to the target mol. Optionally, the compn. can contain photoreactive groups for use in attaching the reagent compn. to the surface. The reagent compn. can be used to provide activated slides for use in prep. microarrays of nucleic acids. Glass slides coated with a copolymer of acrylamide, N-[3-(4-benzoylbenzamido)propyl]methacrylamide (BBA-APMA), and N-succinimidyl 6-maleimidohexanoate (MAL-EAC-NOS) (prepn. given) were reacted with amine-modified PCR products from the .beta.-galactosidase gene using microarraying spotting pins.				

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L5 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
 AN 1997:640705 CAPLUS
 DN 127:278601
 TI Photoactivatable chain transfer reagents, manufacture of semitelechelic polymers having at least one terminal photoactivatable groups using these reagents, and use of these polymers to modified surfaces of plastics
 IN Swanson, Melvin J.; Amos, Richard A.; Swan, Dale G.; Opperman, Gary W.
 PA BSI Corp., USA
 SO PCT Int. Appl., 68 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9734935	A1	19970925	WO 1997-US5344	19970320
	W: AU, CA, JP, MX				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5942555	A	19990824	US 1996-619303	19960321
	CA 2249287	AA	19970925	CA 1997-2249287	19970320
	AU 9724310	A1	19971010	AU 1997-24310	19970320
	AU 737979	B2	20010906		
	EP 888389	A1	19990107	EP 1997-920012	19970320
	R: DE, ES, FR, GB, IT				
PRAI	JP 2000508003	T2	20000627	JP 1997-533803	19970320
	US 1996-619303	A	19960321		
	WO 1997-US5344	W	19970320		